

Remarks

This amendment responds to the official action mailed June 2, 2010. Claims 1 and 4-14 are pending. Claim 10 was subject to an indication of allowable subject matter, and has been placed in independent form, including limitations from the base and intervening claims (but not all the limitations, as discussed below).

Claim 1 has been amended to better distinguish over the prior art as applied in the official action. Claim 9 has been placed in independent form and has a scope comparable to claim 10. Claims 1, 9 and 10 are allowable as now presented. The remaining claims depend directly or indirectly from these claims and are allowable at least due to their dependence. Applicant requests reconsideration and allowance.

In the official action, claims 9 and 10 were considered indefinite due to the terms "relatively" in claim 9 and "roughly" in claim 10, which terms were considered to lack a standard of comparison understood by a person of ordinary skill.

In Claim 9, the spindle carrying the control roller was recited to have a "relatively larger diameter in a pull-out direction." Applicant has amended claim 9 to state that the diameter is relatively larger in the pull-out direction than in a direction perpendicular to the pull-out direction. The dimension perpendicular to the pull-out direction is the distance between respective flanges of the carcass rail and the pull-out rail. This aspect is supported at paragraph [0034] of the application as published and is illustrated at Fig. 5. The carcass rail and the pull-out rail contact opposite sides of the control roller. In the disclosed embodiments, the distance between the flanges of the carcass and pull-out rails is fixed, because the three rails (the carcass rail, central rail and pull-out rail) slide along one another on rollers or ball bearings. The orientation of the out-of-round cross section of the spindle affects the bearing part that turns on the spindle and resides between the flanges of the respective carcass and pull-out rails. There is no similar arrangement in the prior art.

Claim 10 recites that the out-of-round cross section of the spindle is substantially elliptical. Applicant has replaced the term "roughly" in claim 10 with "at least substantially." The term "substantially" generally means "less than totally." The

term is consistent with the disclosure and the scope of the claim as filed. The term "substantially" has been judicially determined to comply with 35 U.S.C. §112, second paragraph, and is generally approved. See, for example, *Verve LLC v. Crane Cams Inc.*, 311 F.3d 1116, 65 USPQ2d 1051 (Fed. Cir. 2002). The term "substantially" is apt to avoid unnecessary limitation of the scope of a claim to a strict numerical definition of the specified parameter (such as a mathematically defined ellipse in this case), while being understandable to a person of ordinary skill. See, *Pall Corp. v. Micron Separations, Inc.*, 66 F.3d 1211, 1217, 36 USPQ2d 1225, 36 USPQ2d 1225, 1229 (Fed. Cir. 1995).

With these changes, claims 9 and 10 are definite. The claims are supported by an enabling disclosure and no new matter is presented. Applicant requests reconsideration and withdrawal of the rejections under 35 U.S.C. §112, 2^d paragraph.

In the official action, allowable subject matter was indicated as to claim 10, but claim 1 was rejected under 35 U.S.C. §103 over a combination of US 4,737,039 – Sekerich and 5,344,228 – Kovarik. According to the official action, Sekerich teaches a structure including a control roller 18 having a central body 52 (emphasis supplied) and a soft body 50 and is considered to meet claim 1 except for the aspect of the central body being a hard body. Kovarik is considered to supply the difference at col. 5, lines 10-13 ("the roller comprises a resilient material such as soft rubber with a steel core.")

Reconsideration is requested. Applicant does not dispute the statements in the official action, but the official action does not follow the language of claim 1. The prior art, whether considered individually or in combinations, does not disclose or render obvious the invention defined in claim 1 as a whole.

Applicant's claim 1 does not define a hard central part of a roller like a spindle or wheel hub carrying a soft radially outer part resembling a tire on a wheel, namely wherein the soft radially outer part makes contact with a surface and the hard radially inner part does not. The term "central" body quoted in the official action is not found in claim 1.

Claim 1 defines a roller with a bearing body that has both a hard body and a soft body on its radially outer part. The soft body protrudes radially beyond the hard body, but extends only over a limited axial span of the bearing part. Along the axial span of the bearing part, both the hard part and the soft part bear against the carcass rail and the pull-out, namely on opposite sides of the bearing part. This structure is illustrated in applicant's Figs. 3 and 4 in two different embodiments, where the ring 20 comprising a relatively softer material protrudes radially beyond the surface of the hard body 17.

In claim 1, the control roller comprising the bearing part is defined such that both the hard body and the soft body engage with both the carcass rail and the pull-out rail, which rails translate in opposite directions at a fixed spacing in which the control roller is compressed. Claim 1 defines the soft body of the bearing part projecting radially of the hard body of the bearing part over a limited axial distance. In the embodiments of claims 9 and 10, the spindle has an oriented out-of-round shape. These two distinct arrangements of claims 1 and 9/10 are not disclosed or suggested in the prior art of three-rail pull-out drawer guides. Sekerich and Kovarik disclose soft rollers that are compressed in the fixed space between the rail flanges and arranged to turn on cylindrical axes and/or hubs. Sekerich has a cylindrical axle 58 and wheel hub 52 (both round in cross section) shown in Figs. 8, 9 and 16. Kovarik as a cylindrical axle 82, shown in Fig. 9. The prior art does not meet the invention claimed as a whole, whether considered separately or in combination.

Applicant has amended claim 1 to positively recite that the hard body of the roller engages with the carcass rail and the pull-out rail. The soft body projects in a radial direction relative to the hard body, and the soft body extends over an axial extent less than an axial extent over which the hard body engages with the carcass rail and with the pull-out rail. These aspects of claim 1 are not met in the prior art and are not obvious.

Applicant has amended claims 9 and 10 to rely on the oriented out-of-round or substantially elliptical cross section of the spindle that carries the bearing part. Although the official action has cited examples of splined or otherwise non-round

spindles that are expected to produce friction with a part that turns on the spindle, there is no disclosure in the prior art of an oriented out-of-round cross section, specifically being wider in the direction of translation of rails and narrower in the direction between the rails, as particularly and distinctly claimed. Claims 9 and 10 are likewise allowable.

There is no logical basis to expect a person of ordinary skill to perceive a likely benefit to be achieved by modifying the prior art. Sekerich teaches an axle 58 on which a wheel-type roller 18 has a hub 52 and a tire of resilient material such as rubber (col. 3, lines 65-66 and Figs. 8, 9 and 16). The tire has a sufficient diameter to contact the flanges of the rails. There are ball bearings that fix the distance between flanges of the carcass rail. In Kovarik the roller is turned orthogonally relative to Sekerich but likewise the roller has a diameter to fit (with compression) between the bodies of the carcass and pull-out rails. There is no logical reason for a person of ordinary skill to expect that modifications including a soft rim protruding from the roller tire over a limited axial width as in claim 1 or an oriented non-round spindle as in claims 9 and 10 would achieve any particular benefit. Only applicant has determined that these aspects permit a smoother action. There is no basis to believe that the invention claimed as a whole would have been known or obvious.

Among the references cited in earlier official actions, US 2,873,150 – Hutzelman has a roller with a ring 28 on a roller 18 to obtain a kind of traction with rail flanges, one at a time, wherein the rail flanges do not move in opposite directions or compress a roller in a fixed space between such flanges. In Hutzelman, there is no central rail to be regulated.

Unlike Hutzelman, applicant's invention concerns a pull-out guide for a drawer comprising a carcass rail, a pull-out rail and a central rail (i.e., three rails) that are relatively movable so that the drawer be extended fully outwardly relative to a carcass. As the drawer of a three rail configuration is displaced, the central rail and the pull-out rail move together in the same direction with different velocities. The carcass rail is stationary and the pull-out rail moves or from the reference position of the central rail, the carcass and pull-out rails move in relatively opposite directions.

Hutzelman has only a carcass rail and a pull-out rail (i.e., two rails). The rollers of the suspension for a drawer according Hutzelman do not synchronize a position and movement of a central rail with pulling-out and pushing-in operations of the drawer in a pull-out guide of the invention.

In three rail arrangements of a type claimed by applicant, the control roller remains in contact with and is held with traction against the flanges of the carcass rail and the pull-out rail, respectively. Applicant's carcass and pull-out rail flanges move with equal and opposite displacement while bearing on diametrically opposite sides of the control roller. A person skilled in the art could not be expected to think about the possibility of Hutzelman's roller as a control roller held with traction against the flanges of a carcass rail and the pull-out rail. Trapping a roller with traction between the flanges in Hutzelman would prevent the drawer from moving at all, whether empty or loaded and pulled-out or pushed-in. Conversely, if a person skilled in the art considered Hutzelman's roller out of its own context and in the context of a three rail configuration, there is no reason for the skilled person to expect that there would be any improvement or benefit to be realized by the more costly and more complex structure of a roller with a soft body and a hard body as claimed, instead of a simple compressible roller.

Hutzelman's roller 18 and ring 28 have and need clearance between the spaced flanges of the carcass and pull-out rails because otherwise the roller would drag. Hutzelman does not teach engaging a roller with the spaced flanges of two rails. Instead Hutzelman transfers the drawer weight between an upper flange and a lower flange (engaging only one of them at any given time), and at the same time reverses the rotation directions of the roller, at a point where a pulled-out drawer overbalances and tilts forward (or when pushed-in tilts rearward). There is no logical reason to expect a person of ordinary skill to expect that a soft ring as disclosed would be likely to benefit an arrangement wherein the spacing between oppositely-translated flanges is fixed and a resilient roller as in Kovarik and Sekerich is compressed in the fixed space to engage both flanges.

For the foregoing reasons, claim 1 and the claims depending from claim 1 are allowable. For reasons already recognized as provided in the indication of allowable subject matter for claim 10, claims 9 and 10 are also properly allowable.

In the official action, US 4,066,219 – Sharp discloses examples of spindles with non-round cross sections. But the Sharp spindle cross sections are not related to any orientation of an external structure such as the elongation between parallel flanges of oppositely translated rail flanges. Sharp's non-round irregularities enhance the engagement between a spindle and a cylindrical opening in a spool and serve only to add friction to resist rotation. There is no basis to believe that Sharp demonstrates a likely benefit to be achieved by orienting the non-round irregularities as claimed by applicant to complement the longitudinal and lateral clearance between the space flanges of elongated drawer rails.

Cited US 6,532,239 – McIntosh has a non-round cross section for a short distance along an elongated shaft 58, apparently to interact with locking dogs. There is no disclosure or suggestion of an orientation associated with frictional action because the major axis of the ellipse is the same size as the diameter of the bore in which the shaft is disposed. McIntosh teaches away from friction in that the shaft must be freely rotatable through 90° in order to open or close the McIntosh locking dogs. There is no basis to believe that the person of ordinary skill would consider a likely benefit in extracting the oval cross section that McIntosh uses to operate locking dogs, for use in a frictional spindle, let alone a spindle have an orientation aspect.

US 2005/0138719 - Grebonval was also cited for a spindle. It is unclear how the disclosed spindle is remotely related to the other prior art or to the invention claimed by applicant. Grebonval's spindle (for a dispenser of paper towels from a roll) is tilted relative to a base and appears to be conical (having a round cross section along its entire length). There is no articulated basis of record to support a rejection based on this reference, and no such basis is apparent.

Claims 1, 9 and 10 are allowable because the prior art of record, and the capabilities of persons of ordinary as articulated in the official action, clearly fail to

reach the invention claimed as a whole. The claims as amended are definite. The differences between the invention and the prior art are such that the subject matter claimed as a whole is not shown to have been obvious.

Applicant requests formal allowance of the pending claims.

Respectfully submitted,

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/Stephan Gribok/
Stephan P. Gribok, Reg. No. 29,643
Duane Morris LLP
30 South 17th Street
Philadelphia, PA 19103-4196
tel. 215-979-1283
fax. 215-689-2443
spgribok@duanemorris.com

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